KALYUZHIN, G.A. [Kaliuzhyn, H.A.], kand.med.nauk

A conversation which has never taken place. Rab.i sial. 38 no.6:18 Je '62. (MIRA 15:8)

(INFANTS—CARE AND HYGIENE)

1. KALYUZHIN, M. G.

2. USSR (600)

4. Dairy Plants - Heating and Ventilation

7. "Heating generating system in creameries and cheese factories," Mol. prom., 13, No. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February, 1953. Unclassified.

KALYUZHKA, I.I. (Balashov)

Experimental excursion to a planning office. Mat. v shkole no.5:45-47 S-O '59. (MIRA 13:2)
(Geometry--Study and teaching) (Geometrical drawing)

ACCESSION NR: AP4039269 S/0078/64/009/006/1497/1499

AUTHOR: Kalyuzhnaya, A. G.; Polushina, I. K.; Tret'yakov, D. N.

TITLE: Gallium-phosphorus system

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 6, 1964, 1497-1499

TOPIC TAGS: gallium phosphorus system, gallium phosphide, phase diagram, liquidus curve, solution heat, $A^{III}B^{V}$ compound, Schroder Van't Hoff law

ABSTRACT: The portion of the liquidus curve of the Ga-P phase diagram for alloys containing 3 to 17.5 at% P has been established by differential thermal analysis of the mixtures of ultrapure Ga and GaP more accurately than was possible in the past. The heat of solution of GaP in Ga was derived graphically and the data were correlated with corresponding data previously obtained for the InB^{V} and GaB^{V} compounds. It was shown that 1) the heat of solution of

Card 1/2

ACCESSION NR: AP4039269

0.25 molar gallium phosphide is the highest of all $A^{III}B^{V}$ compounds studied, 2) the heat of solution in the GaB^{V} series unexpectedly decreases from GaSb to GaAs, and 3) a deviation from the Schroder-Van't Hoff law is highly probable when the stoichiometric composition is approached in the GaP system, as was observed in other $A^{III}B^{V}$ systems. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 25Nov63 DATE ACQ: 18Jun64 ENCL: 00

SUB CODE: GC, MT NO REF SOV: 002 OTHER: 005

Card 2/2

KALYUZHNAYA, A. M., Z. V. YERMOL'YEVA

"Bacterial Amines and Their Antigenic Properties," Zhurnal mikrobiol. i immunol., 13, 3, 370-375, 1934

TORZHINSKAYA, L.P.; KALYUZHNAYA, A.M.

Protein substances of wheats of the southern Ukraine. Izv.vys. ucheb.zav.;pishch.tekh. no.5:28-33 '58. (MIRA 11:12)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina, kafedra biokhimii zerna i zernovedeniya.
(Ukraine--Wheat--Varieties) (Gluten)

ROMENSKIY, N.V.; BARKER, G.O.; KALYUZHNAYA, A.M.

Bread-baking qualities of some varieties of soft wheats of the southern Ukraine. Izv.vys.ucheb.zav.;pishch.tekh. no.5:34-38 '58. (MIRA 11:12)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina, kafedra biokhimii i zernovedeniya.
(Ukraine--Wheat--Varieties)

BARER, G.O.; KALYUZHNAYA, A.M.; SAMRO, M.M.

Investigating technological properties of wheat. Izv.vys. ucheb.zav.; pishch.tekh. no.3:11-15 '59. (MIRA 12:12)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina. Kafedra mukomol'no-krupyanogo proizvodstva..
(Wheat--Analysis)

ROMENSKIY, N.V.; KALYUZHNAYA, A.M.; BARER, G.O.; ATANAS, L.G.; STOYEVA, O.Z.

Bread baking properties of prospective varieties of wheat.
Izv.vys.ucheb.zav.; pishch.tekh. no.6:3-4 '59.
(MIRA 13:5)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina. Kafedra biokhimii zerna i zernovedeniya.
(Wheat--Varieties)

DEMIDOV, P.G.; BARER, G.O.; NOKHOTOVICH, A.Ya.; KALYUZHNAYA, A.M.

Milling properties of some wheat varieties of the Ukraine. Izv. vys.ucheb.zav.;pishch.tekh. no.5:12-16 '60. (MIRA 13:12)

1. Odesskiy tekhnologicheskiy institut imeni I.V. Stalina. Kafedra mukomol'nogo i kombikormovogo proizvodstv.
(Ukraine--Wheat--Varieties)

DEMIDOV, P.G.; BARER, G.O.; NOKHOTOVICH, A.Ya.; KALYUZHNAYA, A.M.

Technological properties of promising Ukrainian wheat varieties.
Izv. vys. ucheb. zav.; pishch. tekh. no.4:13-17 '61. (MIRA 14:8)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina, kafedra tekhnologii mukomol'no-krupyanogo i kombikormovogo proizvodstva.
(Ukraine--Wheat--Varieties)

ROMENSKIY, N.V.; CHMYR', A.D.; KALYUZHNAYA, A.M.; MUZYKA, M.F.

Biochemical and baking properties of flour from wheat subjected to Co^{60} gamma rays. Izv.vys.ucheb.zav.; pishch. tekh. no.6:28-32 '61. (MIRA 15:2)

1. Odesskiy tekhnologicheskiy institut, kafedra biokhimii i zernovedeniya.

(Wheat)(Gamma rays)

TORZHINSKAYA, L. R.; ROMENSKIY, N. V.; KALYUZHNAYA, A. M.; POPOV, P. V.

Morphological and biochemical characteristics of some strong wheats from the 1960 crop in the southern part of the Ukraine. Izv. vys. ucheb. zav.; pishch. tekh. no.5:16-20 '62. (MIRA 15:10)

1. Odesskiy tekhnologicheskiy institut imeni Lomonosova, kafedra biokhimii i zernovedeniya.

(Ukraine—Wheat)

DEMIDOV, P.G.; BARER, G.O.; KALYUZHNAYA, A.M.; NOKHOTOVICH, A.Y[illegible]

Technological characteristics of wheats of the 1961 crop in the southern part of the Ukraine. Izv.vys.ucheb.zav.; pishch. tekh. no.3:18-20 '63. (MIRA 16:8)

1. Odesskiy tekhnologicheskiy institut imeni Lomonosova, kafedra tekhnologii zerna.

(Ukraine--Wheat)

ZAYTSEVA, G.N.; BAN TIN-CHZHAO [Pang T'ing-chao]; KALYUZHNAYA, A.P.; BELOZERSKIY, A.N.

Species specificity of soluble ribonucleic acids and aminoacyl-RNA-synthetases. Biokhimiia 29 no.6:1150-1157 N-D '64. (MIRA 18:12)

1. Biologo-pochvennyy fakul'tet Gosudarstvennogo universiteta imeni M.V.Lomonosova, Moskva. Submitted June 15, 1964.

L 07816-67 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AR6017487 SOURCE CODE: UR/0137/66/000/001/G053/G053

AUTHOR: Borshchevskiy, A. S.; Kalyuzhnaya, G. A.; Smirnova, A. D.; Takhtareva, N. K.

TITLE: Effect of impurities on the crystallization of gallium arsenide and phosphide from metallic solutions

SOURCE: Ref. zh. Metallurgiya, Abs. 1G391

REF SOURCE: Sb. Materialy dokl. 1-y Nauchno-tekhn. konferentsii Kishinevsk. politekhn. in-ta. Kishinev, 1965, 65-66

TOPIC TAGS: gallium arsenide, phosphide, gallium compound, metal crystallization

ABSTRACT: The authors studied the effect which impurities of Cu, Zn, Cd, Si, Ge, Sn, Se, Te and rare earth metals in gallium have on the crystallization of GaAs and GaP from arsenic or phosphorus solutions in molten Ga. Impurity concentration and crystallization conditions were varied over a wide range. The chemical activity of the resultant GaAs and GaP crystals was determined as well as their electrical conductivity, hardness and coefficient of thermoelectromotive force. The effective coefficients of impurity distribution during crystallization of GaP from dilute solutions are as follows: Zn=0.02, Te=0.4 and S=1.3 [sic]. Plate crystals of GaP and GaAs with predetermined impurity concentrations were produced. (From RZh Fiz.) [Translation of abstract]

SUB CODE: 20/11, 13

Card 1/1 mc

UDC: 669:621.315.592

S/032/61/027/003/005/025
B118/B203

AUTHORS: Kalyuzhnaya, G. A. and Khalonin, A. S.

TITLE: Method of analyzing In-As-Se alloys

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 3, 1961, 261-263

TEXT: The course of analysis elaborated by the authors is based on the following principle: gravimetric determination of Se in elementary form; bromatometric determination of As beside In in the filtrate; trilonometric determination of In, also in the filtrate. In can be determined in the presence of As since the latter forms no complex with Trilon B. Se was precipitated by reduction with SO_2 (because of the bromatometric determination of As, the reducing agent had to be chosen so that its excess after the Se reduction might be easily removed from the solution). On the basis of corresponding test series on commercially produced mixtures and alloys, optimum conditions are given in the following prescription: ~100 mg of substance to be analyzed are dissolved in H_2SO_4 (dilution 1 : 4), and bubbled with SO_2 in the cold. Water-bath heating is performed until the Se precipitate

Card 1/3

Method of analyzing ...

is completely transformed to its black modification. It is filtered through a fritted glass filter no. 4, washed with 0.5 N H_2SO_4, hot water, and alcohol, dried to constant weight at 105°C, and the Se is weighed out. SO_2 was removed from the filtrate by heating. After dilution with water and evaporation (to 70-80 ml), 20 ml of HCl and 1-2 drops of methyl orange are added, and titrated with 0.1 $KBrO_3$ (1 ml of 0.1 $KBrO_3$ corresponds to 0.003745 g of As). After titration, the substance is neutralized with ammonia, heated, and alkalized with ammonia. The resulting precipitate is filtered, washed with hot ammonia water, and dissolved in 0.5-1 N H_2SO_4. A spatula-tip of hydroxylamine and a measured excess of Trilon B are added to this solution. The substance is neutralized with ammonia, heated to boiling, cooled, mixed with 10 ml of buffer (pH = 10) and eriochrome black, and titrated up to violet with zinc sulfate. The absolute error of this method does not exceed 1.5% in the determination of the three components. The analysis takes about 4 hr. There are 4 tables and 2 Soviet-bloc references.

Card 2/3

Method of analyzing ...

S/032/61/027/003/005/025
B118/B203

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University), Leningradskiy fiziko - tekhnicheskiy institut Akademii nauk SSSR (Leningrad Physicotechnical Institute of the Academy of Sciences USSR)

Card 3/3

ACC NR: AR6021761 SOURCE CODE: UR/0275/66/000/003/B015/B015

AUTHOR: Borshchevskiy, A. S.; Kalyuzhnaya, G. A.; Smirnova, A. D.; Takhtareva, N. K.

TITLE: Effect of impurities on crystallization of gallium arsenide and phosphide from metal solutions

SOURCE: Ref. zh. Elektronika i yeye primeneniya, Abs. 3B117

REF SOURCE: Sb. Materialy dokl. 1-y Nauchno-tekhn. konferentsii Kishinevsk. politekhn. in-ta. Kishinev, 1965, 65-66

TOPIC TAGS: gallium arsenide, gallium phosphide, crystallization, semiconductor

ABSTRACT: The effect of Cu, Zn, Cd, Si, Ge, Sn, Se, Te, and rare-earth metals as impurities in Ga upon the crystallization of GaAs and GaP from liquid solutions of Ga with As and P was studied. The amount of impurities and the conditions of crystallization were widely varied. The chemical activity, electric conductivity, hardness, and thermo-emf of the resulting GaAs and GaP crystals were measured. In GaP crystallization from delute solutions, the effective distribution coefficients were: Zn -- 0.02, Te -- 0.4, S -- 1.3. Slaty crystals of GaP and GaAs with specified impurity contents were produced. A. R. [Translation of abstract]

SUB CODE: 09 / 20

Card UDC: 621.315.592:548.552:546.681'18/19

L 35355-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AR6017804 SOURCE CODE: UR/0058/66/000/001/A065/A065

AUTHOR: Borshchevskiy, A. S.; Kalyuzhnaya, G. A.; Smirnova, A. D.; Takhtareva, N. K.

TITLE: Influence of impurities on the crystallization of gallium arsenide and phosphide from metallic solutions 27 27 19 B

SOURCE: Ref. zh. Fizika, Abs. 1A552

REF SOURCE: Sb. Materialy dokl. 1-y Nauchno-tekhn. konferentsii Kishinevsk. politekhn. in-ta. Kishinev, 1965, 65-66

TOPIC TAGS: gallium compound, gallium arsenide, crystallization, crystal impurity

ABSTRACT: The authors investigated the influence of Cu, Zn, Cd, Si, Ge, Sn, Se, Te, and rare-earth metals (Me) as contained in the gallium as impurities on the crystallization of GaAs and GaP from liquid solutions. The amounts of impurities and the crystallization conditions varied over a wide range. Estimates are given of the chemical activity of the obtained crystals, their electric conductivity, hardness, and thermal-emf coefficients. The coefficients of effective distribution in GaP crystallized from a dilute solution is $K_{eff}Zn = 0.02$, $K_{eff}Te = 0.4$, and $K_{eff}S = 1.3$. Plate-like GaP and GaAs crystals with prescribed impurity content were obtained. A. Rabin'kin. [Translation of abstract]

SUB CODE: 20, 07

Card 1/1

ACCESSION NR: AP4028450 S/0181/64/006/004/1186/1191

AUTHORS: Kalyuzhnaya, G. A.; Oksman, Ya. A.; Smirnov, V. N.; Shmartsev, Yu. V.

TITLE: Investigation of photoconductivity in gallium phosphide by the noncontact method

SOURCE: Fizika tverdogo tela, v. 6, no. 4, 1964, 1186-1191

TOPIC TAGS: photoconductivity, gallium phosphide, high frequency method, temperature dependence, noncontact method

ABSTRACT: The authors measured the temperature dependence of photoconductivity in poorly conductive GaP. They also determined the spectral distribution of the photoconductivity at different temperatures. These relations are shown graphically in Fig. 1 on the Enclosure. A short-wave maximum is observed, associated with direct transitions. The photoconductivity is found to drop sharply at temperatures below 64K. It is concluded that the use of high-frequency methods for investigating photoconductivity is justified by the reproducibility of the results and by the agreements of these results with data from the literature. The method has led to refinement of several properties of GaP and, in particular has confirmed the

Card 1/3

ACCESSION NR: AP4028450

existence of a supplementary short-wave maximum of photoconductivity due to the structure of the conduction band. The observed patterns do not yet allow construction of a completely reliable model of the processes taking place in GaP, however. For this, further investigations are necessary, especially on low-temperature decay of photoconductivity. Orig. art. has: 7 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute AN SSSR); Gosudarstvennyy opticheskiy institut im. S. I. Vavilova (State Optical Institute)

SUBMITTED: 18Nov63 ENCL: 01

SUB CODE: EC, OP NO REF SOV: 008 OTHER: 005

Card 2/3

ACCESSION NR: AP4028450

ENCLOSURE: 01

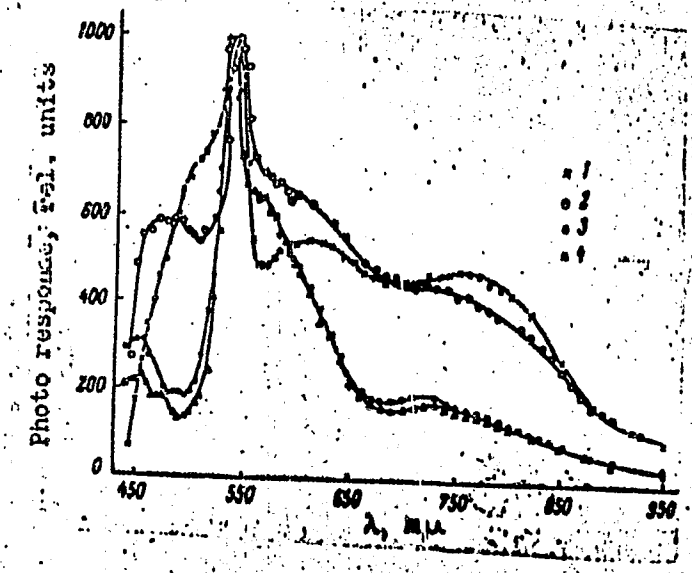

Fig. 1. Spectral distribution of photo-conductivity in GaP at various temperatures

1,2- 211K; 3- 171K; 4- 96K; 1- modulated light; 2-4- nonmodulated light.

Card 3/3

ACCESSION NR: AP4041359 S/0048/64/028/006/0985/0988

AUTHOR: Borshchevskiy, A.S.; Kalyuzhnaya,G.A.; Smirnova,A.D.; Takhtareva,N.K.; Tret'yakov, D.N.

TITLE: Morphological characteristics of laminar gallium phosphide crystals /Report, Third Conference on Semiconductor Compounds held in Kishinev 16-21 Sep 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.6, 1964, 985-988, and insert facing p. 988

TOPIC TAGS: crystal structure, crystal growth, gallium compound

ABSTRACT: Gallium phosphide crystals were obtained by slowly cooling dilute solutions of phosphorus in gallium and subsequently separating the precipitated crystals from the excess gallium, as proposed by G.Wolff,P.H.Keck and J.D.Broder (Bull. Amer.Phys.Soc.29,116,1954). The crystals thus obtained had the zincblende structure, were laminar in form with the (111) faces developed, and ranged in size from 15 x 10 x 1 mm^3 to a few hundred microns. The pure crystals were light orange in color and uniformly transparent. The crystal plates had the form of equilateral triangles, 60° rhombi, regular hexagons, or were of mixed shape. A drawing showing the facetting of the simplest rhombic crystals is given in Fig.1 of the Enclosure. The two

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ACCESSION NR: AP4041359

well developed (111) faces reacted differently to etching with HCl: one face retained its initial specular luster, and the other acquired a mat surface. This polarity is attributed to the regular alternation of planes consisting of gallium or phosphorus atoms respectively. Triangular etch pits marking dislocations were observed on the (111) faces. The dislocation density varied greatly even from place to place on the same crystal, and the total variation among the crystals was from 10^3 to 10^6 cm^{-2}. Twinning planes parallel to the developed (111) faces were found; the twinning appeared to involve rotation of the two portions of the crystal about the $\langle 111 \rangle$ axis. Dark lines were also observed marking the long diagonal of the rhombic plates; these are believed to mark the central portion of the dendritic structure. The growth of the crystals is discussed at some length in rather general terms. It is concluded that the laminar form is a consequence of the non-equilibrium conditions and the excess of one component, that more than one growth mechanism is involved, and that growth probably proceeds differently in the $\langle 111 \rangle$ and the $\langle \overline{111} \rangle$ directions. Orig.art.has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 01

SUB CODE: SS,IC

NR REF SOV: 001

OTHER: 002

Card 2/3

ENCLOSURE:01

ACCESSION NR: AP4041359

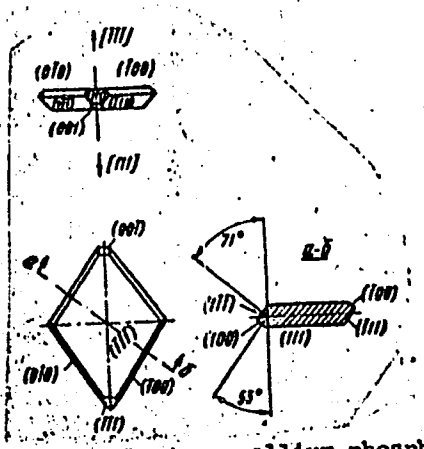


Fig.1. Faceting of rhombic laminar gallium phosphide crystals.

Card 3/3

35529

S/020/62/143/003/024/029
B101/B144

15.9050
11.2215

AUTHORS: Topchiyev, A. V., Academician, Kaptsov, N. N., Kalyuzhnaya, G. D., Mityayeva, A. I., and Balitskaya, I. Ye.

TITLE: Interaction of polymers and copolymers of 2-methyl-5-vinyl pyridine with aromatic nitro compounds

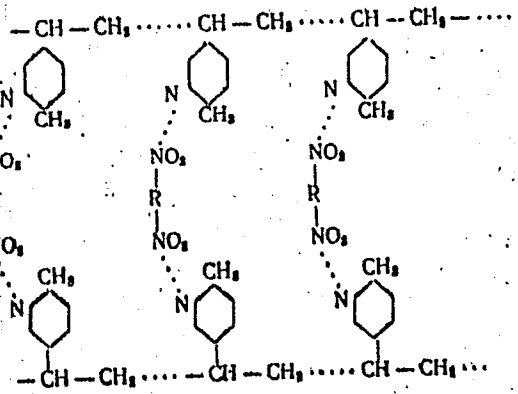
PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 3, 1962, 621 - 624

TEXT: To test the activity of the pyridine-nitrogen atom in addition reactions, polymers (PI) of 2-methyl-5-vinyl pyridine (I) and its styrene copolymers (SI) were reacted with various polar compounds. A PI with softening point 186°C and three SI with I : styrene ratio of 5 : 1, 3 : 1, and 1 : 1 were used. To test the effect of basicity on the reaction with dinitro compounds, the SI with ratio 1 : 1 was nitrated by means of 73% HNO_3 and 24% H_2SO_4 at 20°C (decomposition of this nitro compound occurred above 200°C). 2.5%, 5%, and 10% solutions were prepared from PI and SI in a mixture 1 : 1 of dinitro toluene (DNT) and dinitro xylene (DNX); their viscosity was measured and was found to increase with length of heating. The same behavior was found in the case of nitrated SI. An

Card 1/3

Interaction of polymers...

extraction of PI dissolved in DNT + DNX by means of benzene was unsuccessful. The increasingly dark red and finally dark brown polymer became insoluble insoluble in benzene, and its melting point was higher than 250°C. From this, cross linking was concluded, and the structure



was proposed. As unpurified DNT + DNX mixture caused a considerable

increase in viscosity, polynitro impurities were presumed to be the cause, and this was tested by adding trinitro toluene (TNT) (1.5 - 37.5%). An increase in TNT content of the solvent brought about an increase in viscosity. The effect of DNT alone and dinitro benzene (DNB) was examined (Fig. 4). Hardly any increase in viscosity occurred in the presence of mononitro toluene (MNT). This slowing-down effect of MNT is explained by the blocking of the active centers of PI (the N atoms). There are 4 figures, 4 tables, and 1 Soviet reference.

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR (Institute of Petrochemical Synthesis of the Academy of Sciences USSR)

SUBMITTED: December 11, 1961

S/204/63/003/001/008/013
E075/E436

AUTHORS: Topchiyev, A.V. (deceased), Kusakov, M.M., Kalyuzhnaya, G.D., Kaptsov, N.N., Koshevnik, A.Yu., Nazumovskaya, E.A.

TITLE: Characterization of the properties of homo- and copolymers of 2-methyl-5-vinylpyridine by the methods of light scattering and viscosimetry

PERIODICAL: Neftekhimiya, v.3, no.1, 1963, 90-93

TEXT: The authors determined the molecular weights and other properties of polymerized 2-methyl-5-vinylpyridine and its 1:1 copolymer with styrene. The polymerizations were carried out by heating 2-methyl-5-vinylpyridine at 80°C for 12 hours in glass ampules with 0.1% benzoylperoxide. From the light scattering and viscosimetry data the following relationship was obtained

$$[\eta] = 6.17 \times 10^{-4} M_w^{0.615}$$

where $[\eta]$ - intrinsic viscosity and M_w - mean molecular weight. The mean molecular weights of the polymer fractions obtained by

Characterization of ...

petroleum-ether precipitation, ranged from 1×10^6 to 3×10^4. The mean molecular weights of the copolymer were 4.3×10^5 and 1.1×10^5 for the polymerization times of 12 and 6 hours respectively. There is 1 table.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR
(Institute of Petrochemical Synthesis AS USSR)

SUBMITTED: August 18, 1962

Card 2/2

24,3430 (1227, 1395, 1163)

30804
S/181/61/003/011/051/056
B104/B138

AUTHORS: Gross, Ye. F., Kalyuzhnaya, G. K., and Nedzvetskiy, D. S.

TITLE: Complex structure of the absorption spectrum of monocrystalline gallium phosphide

PERIODICAL: Fizika tverdogo tela, v. 3, no. 11, 1961, 3543-3545

TEXT: Single crystals of GaP were investigated at nitrogen temperature. Single crystals 4 to 5 mm long, 0.3 mm to a few microns thick were obtained from the melts by crystallization (G. Wolff et al., Bull. Am. Phys. Soc., 29, 1, 1954). In transmitted light thin crystals appeared orange and thick ones yellow-green. The absorption spectra were taken with an ИСП-67 (ISP-67) spectrograph with a camera of 1500 mm focal length. In the region studied the dispersion was 10.5 Å/mm. The absorption edge of a GaP single crystal is shown in Fig. 1. This spectrum was taken for specimens that had been cooled slowly. Rapidly cooled specimens had only one broad line (5363.2 Å) which is shifted into the long wave range by a few angstroms. The lines can be grouped in pairs: an intense narrow and a weak narrow line, a weak and a strong broad line, and two broad lines. The distance

Card 1/4 2

GROSS, Ye.F.; KALYUZHNAYA, G.K.; NEDZVETSKIY, D.S.

Complex structure of the absorption spectrum of monocrystalline gallium phosphide. Fiz.tver.tela 3 no.11:3543-3545 N '61. (MIRA 14:10)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
(Gallium phosphide crystals—Spectra)

Morphological features of crystals of GaP. G. V. Averkiyeva, A. S. Borshchevskiy, G. K. Kalyuzhnaya, A. D. Smirnova, D. N. Tret'yakov, N. K. Tokhtareva (10 minutes).

Features of the growth of crystals of silicon carbide of the cubic modification from the gaseous phase. A. A. Pletyushkin, S. N. Gorin, L. M. Ivanova (10 minutes).

Investigation of the physical properties of semiconducting compounds with the lattice of ZnS and NaCl in the melting region and liquid state. V. M. Glazov, S. N. Chizhevskaya, N. N. Glagoleva (10 minutes).

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

KALYUZHNAYA, G. P.

Government Monopolies

"Legal structure of foreign trade monopolies in the U.S.S.R. and their historical development." Reviewed by N. Inozemtsev, V. Pozdnyakov. Vnesh.torg. no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.

BYURIG, [illegible] ZIMNAYA, I.I.

Evaporation from agricultural fields on drained bogs of the Ukrainian S.S.R. Trudy GGI no.126:132-152 '65.

(MIRA 18:8)

KALYUZHNAYA, K.M.; KALYUZHNYY, V.A.

Paragenesis of accessory beryl, phenacite, and euclase in topaz-morion pegmatites. Min. sbor. no.17:136-147 '63. (MIRA 17:11)

1. Gosudarstvennyy universitet imeni Franko, L'vov i Institut geologii i geokhimii goryuchikh iskopayemykh AN UkrSSR.

KALYUZHNAYA, K.M.; BULGAKOV, V.S.

Sectorial twinning of plagioclase in the endomorphism of basic rock in the Volhynian pegmatite field. Min.sbor. 18 no.2:195-198 '64. (MIRA 18:5)

1. Gosudarstvennyy universitet imeni Ivana Franko, L'vov i ekspeditsiya tresta gornotoplivnoy promyshlennosti Kiyevskogo Soveta narodnogo khozyaystva.

KALYUZHNAYA, L.P.; BRYANSKAYA, A.M.; LITOVCHENKO, Ye.P.; LUKACH, I.G.; LYSENKO, Z.A.; MAYKO, I.I.; [illegible], S.M.

Isolation and study of actinomycetes-antagonists from soils of some Ukrainian provinces. Mikrobiologiia 31 no.4:654-661 Jl-Ag '62. (MIRA 18:3)

1. Kiyevskiy institut epidemiologii i mikrobiologii.

KALYUZHNAYA, L. D.

"Combined Action of Antibiotics upon Bacillus Enteritidis."
Khar'kov Medical Inst, Khar'kov, 1955. (Dissertation for the Degree of Candidate in Medical Sciences)

SO: M-955, 16 Feb 56

KALYUZHNAYA L. D

USSR / Microbiology. Antibiosis and Symbiosis. Antibiotics. F-2

Abs Jour: Ref Zhur-Biol., 1958, No 17, 76698.

Author : Kalyuzhnaya, L. D.
Inst : Not given.
Title : Combined Effect of Antibiotics on a Coliform Bacterium.

Orig Pub: Vrachebn. delo, 1957, No 1, 43-46.

Abstract: The sensitivity to antibiotics of 43 investigated strains of coliform bacterium of various origins was determined by the method of serial cultivation in BPM. The bacteriostatic concentration of syntomycin during a 24 hour exposition fluctuated from 10 to 500 γ/ml. Bactericidal doses comprised 100-500 γ/ml. Bacteriostatic concentrations of sanasin equal 100-800 γ/ml; bactericidal - from 150 to 1000 γ/ml. The combined administration of both antibio-

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Chair Microbiology, Khar'kov Med Inst.

L 41087-66 EWT(1)/T JK

ACC NR: AR6011881 SOURCE CODE: UR/0299/65/000/022/B036/B036

25
24
B

AUTHOR: Kalyuzhnaya, L. D. 16

TITLE: Effect of antibiotics on antagonistic properties of actinomycetes

SOURCE: Ref. zh. Biologiya, Abs. 22B241

REF SOURCE: Sb. Antibiotiki. Kiev, Zdorov'ya, 1965, 64-68

TOPIC TAGS: bacteria, antibiotic, soil bacteriology, streptomycin, erythromycine, tetracycline

ABSTRACT: 199 strains of actinomycete-antagonists isolated from Ukrainian soils and 8 strains displaying no antagonistic properties in relation to staphylococcus and enteric rods were grown in 0.005, 0.01, 0.05 and 0.1 γ/ml chlortetracycline, 0.05, 0.1, 0.5 and γ/ml streptomycin, and 0.01, 0.05 and 0.1 γ/ml erythromycin to increase antibiotic activity. In some cases antibiotic activity was slightly increased by growth in agar mediums and liquid mediums. However, use of this method requires preliminary selection of the antibiotic and its doses because sometimes a decrease of actinomycete antibiotic activity rather than an increase is observed. Chlortetracycline action failed to induce antagonism in all 8 strains, which initially displayed no

Card 1/2 UDC: 615.779.90

L 41087-66

ACC NR: AR6011881

antibacterial activity. V. Kuznetsov. [Translation of abstract].

SUB CODE: 06

Card 2/2

I 41066-66 EWT(1)/T JK

ACC NR: AR6011883 SOURCE CODE: UR/0299/65/000/022/0037/0037

AUTHOR: Bryanskaya, A. M.; Kalyuzhnaya, L. D.

TITLE: Actinomycetes from irrigated fields as antagonists of blue pus rods and Proteus

SOURCE: Ref. zh. Biologiya, Abs. 22B254

REF SOURCE: Sb. Antibiotiki. Kiev, Zdorov'ya, 1965, 97-101

TOPIC TAGS: bacteriology, antibiotic, soil bacteriology

ABSTRACT: 3056 actinomycete strains were isolated from the soils of irrigated Odessa fields; 24.4% of these were antagonists of Bact. proteus vulgaris and 13% were antagonists of Bact. pyocyaneum. In other Odessa Oblast soils, the number of antagonists of Bact. pyocyaneum was reduced by half, whereas the percentage of actinomycetes suppressing Bact. proteus vulgaris was the same in irrigated fields as in nonirrigated fields. In irrigated field soils more antagonists of Bact. pyocyaneum and Bact. proteus vulgaris are found in fall and winter than in spring and summer. Most of the active strains are found to be representatives of the Lavendulae-Roseus series and the smallest number is found in the Aureus series. The species composition of actinomycetes

Card 1/2 UDC: 615.779.90

ACC NR: AR6011883

suppressing blue pus rods and Proteus is the same in irrigated fields as in nonirrigated fields and is represented primarily by Act. lavendulae and Act. griseus. The predominance of these species in irrigated field soils accounts for the high percentage of antagonists to the test bacteria. V. Kornetsov. [Translation of abstract].

SUB CODE: 06

Card 2/2

KALYUZHNAYA, L.D. [Kaliuzhna, L.D.]; FROLOV, A.F.

Characteristics of actinomycetes, the inhibitors of the growth of the tissue culture of malignant tumors. Mikrobiol. zhur. 27 no.5:10-16 '65. (MIRA 18:10)

1. Kiyevskiy nauchno-issledovatel'skiy institut epidemiologii i mikrobiologii.

LITOVCHENKO, Ye.T.; KALYUZHNAYA, L.D.; KOZHUKHAR', I.C.

Actinomycetes of the root system of the apple tree. Mikrobiologiia 34 no.5:876-882 S-O '65. (MIRA 18:10)

1. Krymskaya opytnaya stantsiya sadovodstva.

KALYUZHNAYA, L.D.; PORTNOV, S.M.; MAYKO, I.I.; LYSENKO, Z.A.; BRYANSKAYA, A.M.

Antagonistic properties of actinomyces isolated from soils in the Ukraine. Antibiotiki 7 no.3:19-24 Mr '62. (MIRA 15:3)
(ANTINOMYCES)
(UKRAINE--SOILS--MICROBIOLOGY)

KALYUZHNAYA, L.D.; ZADOROZHNAYA, N.A.; OZERYANSKAYA, N.M.

Distribution of actinomycetes with antiviral characteristics in the soils of the Ukraine. Mikrobiologiia 32 no.3:507-512 My-Je '63 (MIRA 17:3)

1. Kiyevskiy institut epidemiologii i mikrobiologii.

SOLLOGUB, V.B.; CHEKUNOV, A.V.; KALYUZHNAYA, L.T.; KHILINSKIY, L.A.

Deep-seated structure of Korosten' pluton according to seismic data. Dokl. AN SSSR 152 no.5:1215-1217 O '63. (MIRA 16:12)

1. Institut geofiziki AN UkrSSR. Predstavleno akademikom V.S. Sobolevym.

SOLLOGUB, V.B., doktor geol.-min.nauk; CHEKUNOV, A.V.; KALYUZHNAYA, L.T.; KHILINSKIY, L.A.

Structure of the upper part of the crystalline crust in the Obruch synecline region based on seismic data. Geofiz.sbor. no.1:18-26 '65. (MIRA 18:12)

1. Institut geofiziki AN UkrSSR. Submitted June 19, 1964.

SOLLOGUB, V.B., doktor geol.-min.nauk; CHEKUNOV, A.V.; PAVLENKOVA, N.I.; KALYUZHNAYA, L.T.

Some characteristics of the wave pattern in the crustal fault zones of the Ukrainian S.S.R. Geofiz.sbor. no.1:32-39 '65.
(MIRA 18:12)

1. Institut geofiziki AN UkrSSR. Submitted November 10, 1964.

SOLLOGUB, V.B.; CHEKUNOV, A.V.; KALYUZHNAYA, L.[illegible]; KHILINSKIY, L.A.; KHARECHKO, G.Ye.

Internal structure of the crystalline basement in the southwestern part of the Korosten' pluton according to seismic data. Geofiz. sbor. no. 5:122-130 '63. (MIRA 17:5)

1. Institut geofiziki AN Ukr SSR.

KALYUZHNAYA, L.T.; SOLLOGUB, V.B.; CHEKUNOV, A.V.

Characteristics of the elastic waves from the interface in the crystalline basement in the southern part of the Belozerka iron-ore region and its subsurface structure. Geofiz. sbor. no.8: 34-43 '64. (MIRA 18:6)

1. Institut geofiziki AN UkrSSR.

ZAERODIN, D.M., kand.istorich.nauk; KALYUZHNAYA, N.K.; MAYSTRENKO, L.F.; MYSNICHENKO, V.P.; PAKHNIN, Ye.I.; SHAPOVAL, A.P.; VASHCHENKO, G.I., red.; KAMINSKIY, L.N., red.; LIMANOVA, M.I., tekh.red (MIRA 16:6)

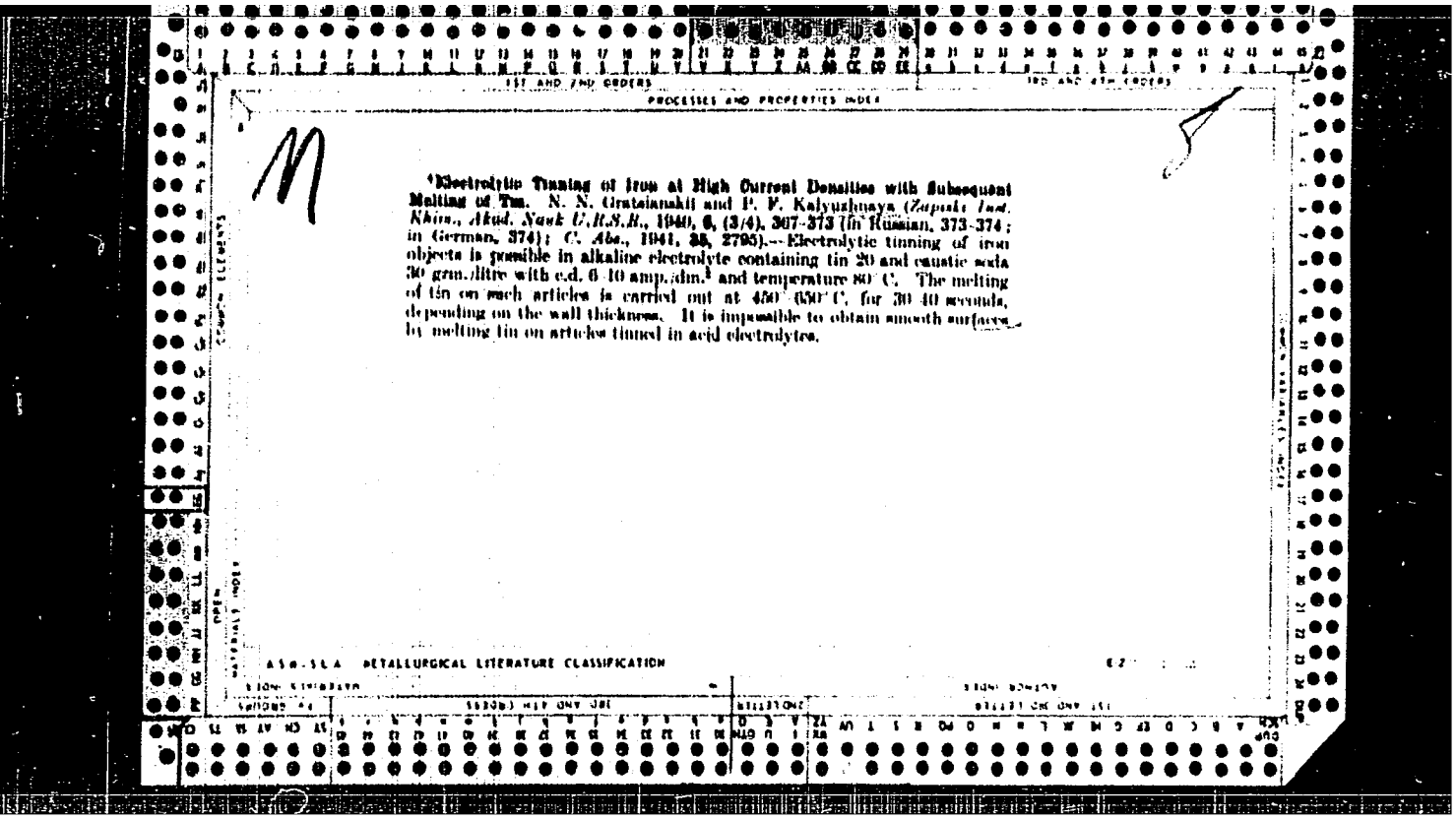
[Work and live the communist way, 1958-1962] Rabotat' i zhit' po kommunisticheski; 1958-1962. Sbornik dokumentov i materialov. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1963. 250 p. (MIRA 16:6)

1. Kommunisticheskaya partiya Ukrainy. Khar'kovskiy oblastnoy komitet. Partiynyy arkhiv.
(Kharkov--Efficiency, Industrial)

NAGIYEV, M.F.; KULIYEVA, V.G.; KALYUZHNAYA, N.V.; MAMEDOVA, A.D.

Determining the length of serviceability of alumina-bismuth catalysts in the hydrochlorination of ethylene. Dokl. AN Azerb. SSR 15 no.4:293-297 '59. (MIRA 12:6)

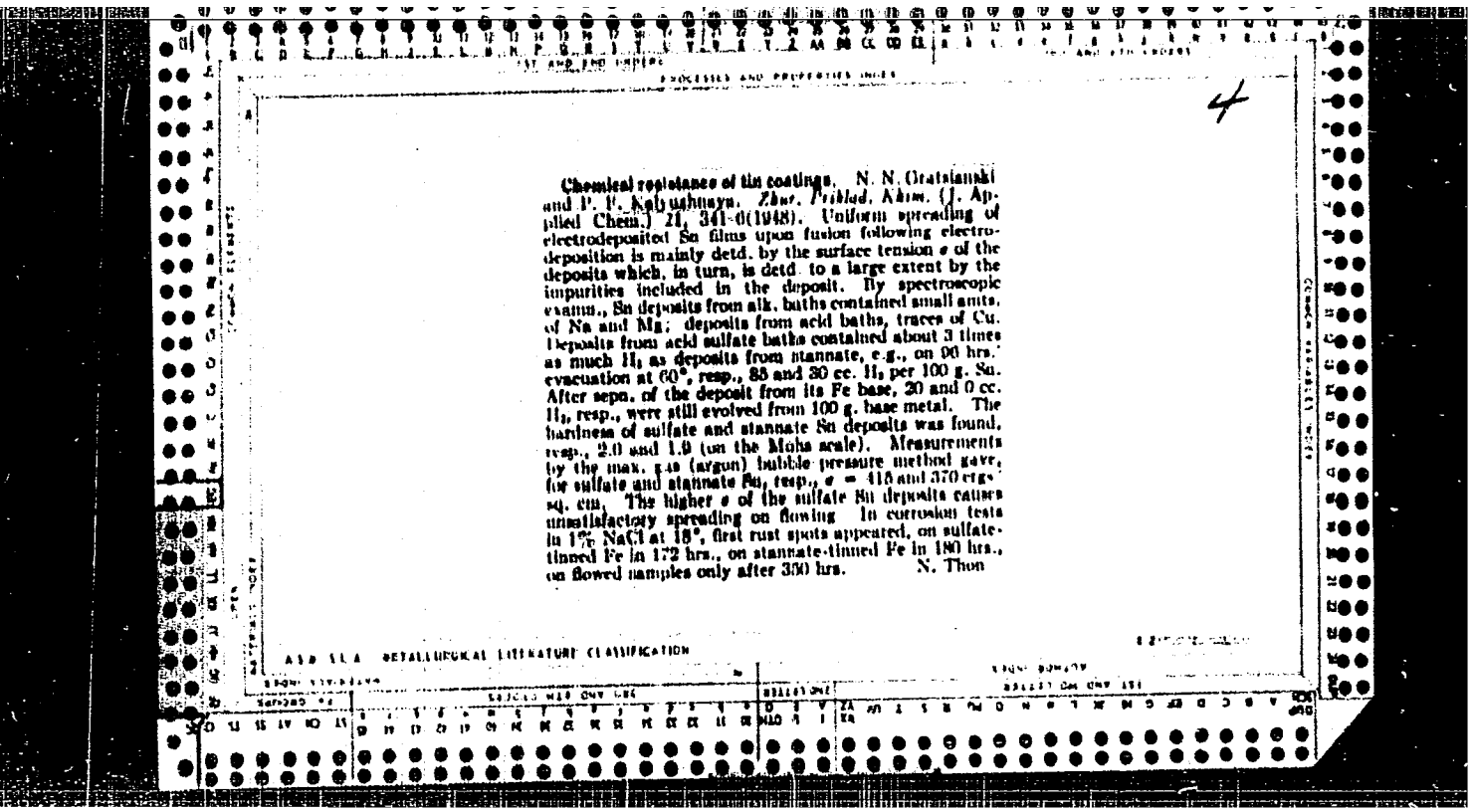
1.Institut nefti Akademii nauk Azerbaydzhanskoy SSR.
(Ethylene) (Hydrochloric acid) (Catalysts)



PROCESSES AND PROPERTIES INDEX

Electrolytic Tinning of Iron at High Current Densities with Subsequent Melting of Tin. N. N. Grafeianakii and P. F. Kalyuzhnaya (*Zapiski Inst. Khim., Akad. Nauk U.R.S.R.*, 1940, **6**, (3/4), 367-373 (in Russian, 373-374; in German, 374); *C. Abs.*, 1941, **35**, 2795).—Electrolytic tinning of iron objects is possible in alkaline electrolyte containing tin 20 and caustic soda 30 grm./litre with c.d. 6–10 amp./dm.^{2} and temperature 80° C. The melting of tin on such articles is carried out at 450°–650° C. for 30–40 seconds, depending on the wall thickness. It is impossible to obtain smooth surfaces by melting tin on articles tinned in acid electrolytes.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Chemical resistance of tin coatings. N. N. Gratsianski and P. P. Kalyushnaya. *Zhur. Prikład. Khim.* (J. Applied Chem.) 21, 341-6(1948). Uniform spreading of electrodeposited Sn films upon fusion following electrodeposition is mainly detd. by the surface tension σ of the deposits which, in turn, is detd. to a large extent by the impurities included in the deposit. By spectroscopic examn., Sn deposits from alk. baths contained small amts. of Na and Mg; deposits from acid baths, traces of Cu. Deposits from acid sulfate baths contained about 3 times as much H_2 as deposits from stannate, e.g., on 90 hrs.' evacuation at 60°, resp., 85 and 30 cc. H_2 per 100 g. Sn. After sepn. of the deposit from its Fe base, 20 and 0 cc. H_2, resp., were still evolved from 100 g. base metal. The hardness of sulfate and stannate Sn deposits was found, resp., 2.0 and 1.9 (on the Mohs scale). Measurements by the max. gas (argon) bubble pressure method gave, for sulfate and stannate Sn, resp., σ = 415 and 370 ergs/sq. cm. The higher σ of the sulfate Sn deposits causes unsatisfactory spreading on flowing. In corrosion tests in 1% NaCl at 18°, first rust spots appeared, on sulfate-tinned Fe in 172 hrs., on stannate-tinned Fe in 180 hrs., on flowed samples only after 350 hrs. N. Thon

KALYUZHNAYA, P. F.

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Chemical Abstracts
May 25, 1954
Electrochemistry

Electrolytic isolation of aluminum from xylene solutions of aluminum halides. P. F. Kalyuzhnaya. *Ukrain. Khim. Zhur.* 18, 661–6(1952)(in Russian).—Electrolysis of fresh solns. of $AlBr_3$ in xylene with Cu, Fe, or stainless steel cathode yields Al in the form of separate crystals which are easily detached for recovery. Electrolysis of the lower layers of xylene-$AlBr_3$ mixt. gives Al as a dense cathodic deposit with an efficiency of 55–65%. Passage of current through the former electrolyte yields tarry materials and a decrease of efficiency. In $AlCl_3$-xylene systems, tar formation is more rapid than in $AlBr_3$-xylene systems. Pt is an unsatisfactory electrode material. G. M. Kosolapoff

KALYUZHNAYA, P.F.

GRATSIANSKIY, N.N.; KALYUZHNAYA, P.F.

Electrodeposition of copper, tin, and lead solutions of complex compounds. Ukr.khim.zhur.19 no.4:377-385 '53. (MLRA 8:2)

1. Institut obshchey i neorganicheskoy khimii Akademii nauk USSR.
(Electroplating) (Compounds, Complex)

KALYUZHNAYA, P.F.

USSR/ Chemistry - Physical chemistry

Card 1/2 Pub. 116 - 5/25

Authors : Kalyuzhnaya, P. F., and Zosimovich, D. P.

Title : Study of the electrochemical properties of the $AlCl_3$-C_8H_{10} - AgCl, $CuCl_2$, $SnCl_2$, $PbCl_2$, $ZnCl_2$ and $CdCl_2$ system

Periodical : Ukr. khim. zhur. 21/1, 27-31, 1955

Abstract : Experiments were conducted to determine some of the electrochemical properties of the $AlCl_3$-MeCl - C_8H_{10} system. It was found that the processes occurring between the individual components of the investigated system result in the formation of electrically conductive solutions. A study of the decomposition potentials of the $AlCl_3$-MeCl-C_8H_{10} system, including metal chlorides (Ag, Cu, Sn, Pb, Cd and Zn),

Institution : Acad. of Sc., Ukr-SSr, Institute of Gen. and Inorg. Chemistry

Submitted : July 2, 1953

Perodical : Ukr. khim. zhur. 21/1, 27-31, 1955

Card 2/2 : Pub. 116 - 5/25

Abstract : showed that Pb had a more negative potential than Sn whereas Ag and Cu showed an almost identical decomposition potential. The effect of anodic current density on the anode potential is discussed. Seven references : 6 USSR and 1 USA (1930-1949). Tables; graph.

GRATSIANSKIY, N.N.; KALYUZHNAYA, P.F.

Studies on the corrosion resistance of metal solid solutions.
Part 4: The system Bi-Sb. Zhur.fiz.khim. 31 no.4:887-892 Ap '57.
(MLRA 10:7)

1. Akademiya nauk USSR, Institut obshchey i neorganicheskoy khimii.
(Solutions, Solid) (Bismuth-antimony alloys)

KALYUZHNAYA, P. F.

AUTHOR: Gratsianskiy, N.N., Kalyuzhnaya, P.F. 76-11-12/35

TITLE: The Investigation of the Corrosion Resistance of Solid Solutions of Metals (Issledovaniye korrozionnoy stoykosti tverdykh rastvorov metallov) VI. The Ag-Cd System (VI. Sistema Ag-Cd)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1957, Vol. 31, Nr 11, pp. 2458-2463 (USSR)

ABSTRACT: This is a continuation of previous works by the same author [Ref.1]. Here the corrosion resistance of Ag-Cd-alloys was investigated by the method of determining losses of weight in a 5% HCl solution and in a 3% NaCl solution at room temperature. The potentials of corroding alloys were measured. By the method of measuring the microstrength the thickness of the loosened alloy surface layer before and after corrosion was determined. In the 5% HCl solution and in the 3% NaCl solution a considerable decrease of weight losses was found within the domain of 40 At.% silver in Ag-Cd alloys. This indicates the formation of corrosion-resistance limit, probably at the cost of the forming of an anti-corrosion surface layer of particles of the constant Ag_2Cd_3-compound. The potential amounts of the corroding alloys, which were measured during corrosion investigations

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The Investigation of the Corrosion Resistance of Solid Solutions of Metals
VI.The Ag-Cd System

in the 5% HCl solution and in the 3% NaCl solution, also change considerably if the alloy contains 40 At.% silver. The analyses of the solutions after corrosion show that from the surface of Ag-Cd alloys cadmium passes into the solution. Thus the anti-corrosion surface layer consisting of particles of the constant Ag_2Cd_3 compound protects the alloy from the penetration of chlorine ions, so that the occurrence of corrosion resistance limits is warranted. There are 5 figures, 2 tables, and 17 references, 3 of which are Slavic.

ASSOCIATION: AN Ukrainian SSR, Institute for General and Inorganic Chemistry, Kiyev (Akademiya nauk USSR, Institut obshchey i neorganicheskoy khimii, Kiyev)

SUBMITTED: July 5, 1956

AVAILABLE: Library of Congress

AUTHORS: Gratsianskiy, N. N., Kalyuzhnaya, P. F. 76-32-5-12/47

TITLE: Investigation of Corrosion Resistance of Solid Metallic Solutions (Issledovaniye korrozionnoy stoykosti tverdykh rastvorov metallov) The System Mg - Cd (Sistema Mg - Cd)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 5, pp. 1038 - 1042 (USSR)

ABSTRACT: In continuation of already carried out experiments two types of structures are investigated in this paper; after annealing at conversion temperatures of solid solutions into chemical compounds (I), after annealing on conditions excluding the formation of chemical compounds (II), with the function of the corrosion resistance limit of the Mg - Cd system on the aggressive medium, as well as the composition and thickness of the surface layer at the boundary alloy-corrosive medium of the parts prior to and after the occurrence of the corrosion resistance boundary being investigated in the present case. Alloys of different cadmium content, as well as pure metals were investigated, with a 0,1 n sulfuric acid solution and a 5% sodium sulfate solution being used. It was observed that alloys richer in magnesium dissolve more quickly in both solutions,

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with a covering layer of corrosion products difficult to solve being formed in the sodium sulfate solution, which fact makes difficult a judgement on the limit of corrosion resistance. The potential measurements of the corroding alloys showed an equal change with the composition, with the potential stabilizing more quickly in the alloys (I) in both solutions, which is explained by a regrouping of the atoms in the alloys (II). The polarographic analyses of the solutions prior to and after corrosion, after the dissolution of the thin surface layer of the alloys showed that prior to the corrosion the composition of the surface layer corresponds to that of the alloy, while after the corrosion the limit of the corrosion resistance is formed by the formation of a layer of cadmium atoms on the surface in 0,1 n sulfuric acids, and in 5% sodium sulfate solutions corrosion products form which are difficult to solve. The investigations of the loosening and thickness of the surface layer showed that after the corrosion the loosening in alloys rich in cadmium amounts to 1,5μ while this value is twice as great in alloys rich in magnesium. There are 3

Investigation of Corrosion Resistance of Solid Metallic Solutions. The System Mg - CD 76-32-5-12/47

figures, 2 tables and 2 references, 2 of which are Soviet.

ASSOCIATION: Akademiya nauk USSR Institut obshchey i neorganicheskoy khimii, Kiyev (Kiyev Institute for General and Inorganic Chemistry, AS Ukrainian SSR)

SUBMITTED: November 30, 1956

1. Corrosion resistant alloys--Analysis 2. Cadmium-magnesium systems--Corrosion 3. Cadmium-magnesium systems--Surface properties 4. Polarographic analysis--Applications

Card 3/3

5(4), 18(7)

AUTHORS: Gratsianskiy, N. N., Kalyuzhnaya, P. F. (Kiyev)

SOV/76-33-5-7/33

TITLE: Investigation of the Corrosion Resistance of Solid Solutions of Metals by the Method of Radioactive Isotopes (Issledovaniye korrozionnoy stoykosti tverdykh rastvorov metallov metodom radioaktivnykh izotopov). II. The System Mg-Cd (II. Sistema Mg-Cd)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 5, pp 997 - 1001 (USSR)

ABSTRACT: A previous paper (Ref 1) dealt with the problem mentioned in the title in connection with indium-lead alloys. This paper reports on the results of investigations of two Mg-Cd alloys, namely alloy 1 (26.6 atm% Mg, 73.4 atm% Cd) and alloy 2 (74.5 atm% Mg, 25.5 atm% Cd). Cd^{115} was added while the alloys were melted. Rb^{86} was used in determining the depths of the micropores. The method of this determination is described in reference 1. The following observations were made with regard to the distribution of $Rb^{+}Cl^{-}$ in the surface pores of the metals Mg, Cd, and the Mg-Cd alloys; with Cd and Mg, $Rb^{+}Cl^{-}$ had penetrated to a depth of 1μ before the corrosion, with

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Cd to a depth of 3μ and with Mg of 5μ after the corrosion. With alloy 1 Rb^*Cl penetrated to 1μ before the corrosion; the penetration depth remained unchanged after corrosion. With alloy 2 Rb^*Cl penetrated to 2μ before corrosion, and to 4μ after corrosion. The isotope exchange between Cd, Mg-Cd alloys, and Cd ions in solution was investigated by means of the isotope Cd^{115}. The alloys were exposed to a jet of $CdSO_4$ solution with pH = 1.38 for 10 minutes. Then tin metal layers were taken-off of the samples by means of anodic dissolution at high current intensity, and the isotope quantity dissolved was measured by radiometry. Upon treatment with $CdSO_4$ solution isotope exchange with dissolved ions occurred on the surface only. No considerable change of the radioactivity of lower layers could be observed. The corrosion was carried out by means of 0.1 normal sulfuric acid. Figures 1 and 2 show the results of the radiometric investigation of alloy 1 and alloy 2 before and after corrosion. Before corrosion,

Investigation of the Corrosion Resistance of Solid Solutions of Metals by the Method of Radioactive Isotopes. II. The System Mg-Cd

SOV/76-33-5-7/33

the cadmium is equally distributed in the crystal lattice of the alloy; increased Cd content is present to 1μ depth only; it is probably adsorbed on the surface of the micropores. After corrosion, the surface composition of the two alloys has changed. The first sector (depth: about 1μ) consists of Cd atoms which remained on the surface, or of Cd which was partially displaced from the solution by Mg ions. At a depth of from 3 - 10μ the Cd content is increased, probably because of diffusion from the surface; the lower layers are unchanged. The unstable alloy 2 has a looser surface; the looseness increases in the course of corrosion leaving either a loose crystal skeleton or causing the atoms to lose the connection and dissolve. There are 2 figures and 13 references, 11 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Kiyev (Institute of General and Inorganic Chemistry Kiyev)

SUBMITTED: August 26, 1957

Card 3/3

87510

188300

S/073/60/026/001/008/021
B004/B054

AUTHORS: Gratsianskiy, N. N. and Kalyuzhnaya, P. F.

TITLE: Study of Corrosion Resistance of Solid Metal Solutions of the System Fe - Cr

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, 1960, Vol. 26, No. 1, pp. 53-57

TEXT: The authors attempted to find the cause of the formation of corrosion-resisting regions in solid alloys of the components Fe and Cr, both of which are subject to corrosion. They investigated the following components: No. 1, Armco iron; No.2, chromium with Fe traces; No.3, 47.34 atom% Fe, 52.52 at% Cr; No.4, 79.71 at% Fe, 20.1 at% Cr; and No.5, 86.1 at% Fe, 13.60 at% Cr. Corrosion was conducted in 5% HCl, 5% H_2SO_4, 5% Na_2SO_4 solution, and 3% NaCl solution at 20°C for 180 hours, and the loss in weight of the specimens due to corrosion was determined: Table 1, corrosion losses, $g/m^2,h$

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Study of Corrosion Resistance of Solid Metal Solutions of the System Fe - Cr

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B004/B054

No. of specimen	5% H_2SO_4	5% HCl	5% Na_2SO_4	3% NaCl
3	0.0	127.0	0.0	0.0
4	10.7	8.2	0.008	0.05
5	3.74	8.91	0.012	0.05

The stability of sample No. 3 in H_2SO_4 was confirmed by measuring the potential. A potential jump occurs at a chromium content of about 50% (Fig. 1). A 3-4 μ thick layer of the corroded specimens was electrolytically dissolved, analyzed, and its composition compared with the solution obtained by corrosion. In 5% HCl, the components dissolve at the ratio at which they are present in the alloy. In 5% H_2SO_4, a corrosion-resisting layer is formed on the surface of the alloy, which corresponds to the σ phase whose basis is the FeCr compound. The thickness of this layer is 1 μ. N. N. Kurnakov, N. I. Korenev, I. I. Kornilov, and V. S. Mikheyev are mentioned. There are 2 figures, 3 tables, and 5 references: 4 Soviet and 1 German.

Card 2/3

S/073/60/026/003/003/004
B016/B054

AUTHORS: Gratsianskiy, N. N., and Kalyuzhnaya, P. F.

TITLE: Investigation of the Resistance to Corrosion of Solid Solutions of Metals of the System Fe - Ni - Cr

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, 1960, Vol. 26, No. 3, pp. 324 - 326

TEXT: The authors wanted to find the limit of resistance to corrosion of alloys of the system Fe - Ni - Cr and also to determine the composition and thickness of the surface layer of the alloys, which forms due to corrosion of the solid metal solutions. Alloys with varying content of the individual components and pure nickel were used. They were ground, and tempered for 6 h in an argon atmosphere at 1150°C. The samples 2, 3, and 4 were subsequently hardened. Corrosion was gravimetrically examined. The alloys were exposed to 5% solutions of H_2SO_4, HCl, and Na_2SO_4, as well as to a 3% NaCl solution at 20°C for 200 h. In Na_2SO_4 and NaCl, the alloys showed only small losses in weight. The limit of resistance

to corrosion cannot be established in these salt solutions within 200 h. Fig. 1 shows the results obtained in H_2SO_4 and HCl. The authors found that in 5% solutions of these acids the loss in weight due to corrosion is reduced rapidly in alloy 3 (20.43% of Cr, 9.77% of Ni). A limitation of the resistance to corrosion was observed in the ternary alloys of the system Fe - Ni - Cr in a range corresponding to the transition from the α- to the γ-phase. The authors measured, at the same time, the potentials of the corrodible alloys. Fig. 2 shows the stabilized potentials as a function of alloy composition. A sudden jump in the direction of positive potential values, depending on the alloy composition, is observed in the range corresponding to the α-γ phase transition, which again confirms the existence of a limit of resistance to corrosion. The authors dissolved thin layers in 5% H_2SO_4 at high current densities for 1-2 sec (Table 1) to determine the surface layer (thickness and composition) forming due to the action of the solution on the alloy surface. The results show that the surface layer is slightly enriched with nickel in the little resistant alloys. This layer remains nearly

unchanged in resistant alloys. In the latter case, the ratio of components corresponds to that in the alloy. The authors analyzed the corrosion solutions to determine the amounts of components which, during corrosion, passed over from the alloy surface into the solutions. Table 2 shows that in nonresistant alloys the ratio $Fe_{sol} : Ni_{sol}$ is higher than the ratio Fe:Ni in the alloy. From the resistant alloys 3, the components pass over into the solution in such amounts as correspond to their content in the alloy. Microhardness measurements showed that nearly no loosening of the surface layer takes place in resistant alloys. The authors therefrom conclude that the limit of resistance to corrosion originates at a Cr content of 18% and a Ni content of 8%, and is explained by the nature of the γ-phase. The cause of the origin of this limit cannot be explained from the standpoint of the Tamman theory (Ref. 3). There are 2 figures, 2 tables, and 3 references: 2 Soviet and 1 German.

Investigation of the Resistance to Corrosion of Solid Solutions of Metals of the System Fe - Ni - Cr

S/073/60/026/003/003/004
B016/B054

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR (Institute of General and Inorganic Chemistry of the AS UkrSSR)

SUBMITTED: July 31, 1958

Card 4/4

S/080/60/033/010/012/029
D216/D306

AUTHOR: Kalyuzhnaya, P.F.

TITLE: On the effect of the surface composition of the cathodes and the nature of the electrolyte on the quality and properties of zinc plating

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 10, 1960, 2253 - 2260

TEXT: The whole present work deals with the study of the effect of the surface composition of the cathode on the properties of electrolytical zinc plating and its dependence on the material of the cathode, nature of electrolyte and physico-chemical conditions of the deposition. To do this, the following was carried out (1) electrolytic deposition of zinc from pyrophosphate, zincate and acid electrolytes; (2) metallographic and microscopic examination of dispersion of precipitate and determination of its grain size and its dependence on the method of pretreating the cathode and the nature of electrolyte; (3) measurement of cathode polarization on

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the deposition of zinc from pyrophosphate compared to zincate and acid electrolytes; (4) study of the effect of surface composition of the cathode and the nature of the electrolyte on the porosity of deposited zinc. The cathodes used were Armco iron, steel 3 and copper and zinc anodes containing small traces of Cd, Cu and Pb. The working surface of the cathode was 20 cm^2. The results obtained showed that the quality and properties of zinc deposits from pyrophosphate, zincate and acid electrolytes on the cathodes of Armco iron, steel 3 and copper which were pretreated as described above, are greatly affected by the surface composition of the cathode only in the case of the acid electrolyte while in zincate and especially in the case of pyrophosphate electrolyte this effect was negligible. The best small-crystalline, dense deposit of zinc were obtained on the cathodes, pretreated by mechanical polishing, while large-grain, unsatisfactory plating was ascertained on the loosened surfaces. The pretreating passivation of the cathode surface had a positive effect only on the quality of the plating from the acid electrolyte. The measurement of cathodic polarization has

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shown that much higher polarization of zinc results in the pyrophosphate electrolyte than in other zinc electrolytes. The stirring of the electrolyte decreases the cathodic polarization in the pyrophosphate electrolyte which suggests its concentration-diffusion character. The measurement of cathodic potentials with time and at different current densities established that the deposition of zinc from the acid electrolyte on the passivated cathode surface occurs at much lower current density than on the surfaces treated by different methods. The determination of grain size and its dependence on cathode treatment and on the nature of the electrolyte and of porosities has shown that largest and most porous zinc deposits were obtained on loosened cathode surfaces; the best non-porous plating, independent of cathode pretreatment (except for loosening), was obtained from the pyrophosphate electrolyte. The adhesion of zinc plating to the base metal for all forms of cathode pretreatment was found to be very firm; on bending, the platings break with the metal without chipping. There are 5 figures, 2 tables and 14 references: 13 Soviet-bloc and 1 non-Soviet-bloc. The

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S/080/60/033/010/012/029
On the effect of the surface ... D216/D306

reference to the English-language publication reads as follows: J. Vaid, T.L. Rama-char, Bl. India, Sec. Electroch. Soc., 7. 1, 1958.

SUBMITTED: January 8, 1960

Card 4/4

KALYUZHNAYA, P.F., kand.khim.nauk; LISOGOR, A.I., inzh.

Removing scale with pickling pastes. Mashinostroenie no.2:76-79 Mr-Ap '62. (MIRA 15:4)

1. Institut obshchey i neorganicheskoy khimii AN USSR.
(Metals--Pickling)

37849

S/080/62/035/005/008/015
D204/D307

1,1800

AUTHORS: Kalyuzhnaya, P. F. and Pimenova, K. N.

TITLE: The electrolytic coating of metals with a Fe-Ni-Cr alloy

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 5, 1962, 1057-1065

TEXT: The present work was carried out to determine the possibility of preparing corrosion resistant Fe-Ni-Cr coatings electrolytically. The following conditions were found to be optimum: electrolyte - $KCr(SO_4)_2.12H_2O$ 400, $NiSO_4.7H_2O$ 56, $(NH_4)_2SO_4.FeSO_4.6H_2O$ 39, trisodium citrate 70 and NaF 8 g/l; pH 1.6 - 1.8; 1X18N9T (1Kh18N9T) steel anodes; cathode current density (D) 15 - 16 amp/dm^2 at 25°C and 18-20 amp/dm^2 at 40°C. At 25°C the Cr content of the coating decreased and that of Fe increased with D, up to a minimum/maximum at 14 - 18 amp/dm^2 and rose/fell thereafter; the Ni content was almost independent of D. At 40°C the Cr rose to a

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maximum at 22 amp/dm^2, Fe decreased and Ni went through a minimum at 18 - 22 amp/dm^2 with increasing D. Current efficiency (η) of the alloy, Cr and Fe rose with increasing D; $\eta_{Ni} \not\propto D$. Current efficiencies η_{alloy} and η_{Fe} decreased with increasing temperature at D = 15 amp/dm^2 to a minimum at 30°C and increased with temperature at D = 22 amp/dm^2, to a maximum at 40°C. η_{Cr} decreased with rising temperature and η_{Ni} remained constant at D's equal to 15 and 22 amp/dm^2. Good results were obtained using a cell with a diaphragm (250 g H_2SO_4/l as the anolyte) and maintaining the pH of the catholyte at 1.6 - 1.8 throughout the process, with D = 10 - 15 amp/dm^2, at 25 - 30°C, with a current efficiency $\leq$18%. Coatings thicker than 6 μ were weakly bonded to the metal base, but could be made adherent by heating in vacuum for 5 hours at 1000°C. Microhardness of the alloy was equal to that of 1Kh18N9T sheet steel before and was ~13% lower after the hot-vacuum treatment. The coatings were resistant to 5% H_2SO_4 but tended to flake off owing to dissolution

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of the base metal through fine cracks. There are 5 figures and 4 tables.

SUBMITTED: May 3, 1961

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KALYUZHNAYA, P.F.; PIMENOVA, K.N.

Electrolytic coating of metals with a Fe-Ni-Cr alloy.
Zhur.prikl.khim. 35 no.5:1057-1065 My '62. (MIRA 15:5)
(Iron-nickel-chromium alloys)
(Protective coatings)

KALYUZHNAYA, P.F.; PIMENOVA, K.N.; GAVRILOVA, Z.P.

Rate of discharge of iron, nickel, and chromium ions during the electrolytic deposition of a Fe-Ni-Cr alloy. Ukr.khim.zhur. 30 no.11:1161-1167 '64. (MIRA 18:2)

KALIUZHNAYA, F.F.; PIMENOVA, K.N.; GAVRILOVA, Z.P.

Internal tension in electrodeposits of the Fe-Ni-Cr alloy.
Zhur. prikl. khim. 37 no.9:2060-2061 S '64.
(MIRA 17:10)

KALYUZHNAYA, R., kand.med.nauk

Reactions of the cardiovascular system in children to prolonged helminth invasion and intestinal lambliasis. Pediatriia no.12: 15-22 '61. (MIRA 15:1)

1. Iz otdeleniya patologii starshego detskogo vozrasta Instituta pediatrii AMN SSSR (dir. - dotsent M.Ya. Studenikin).
(WORMS, INTESTINAL AND PARASITIC) (CARDIOVASCULAR SYSTEM)
(GIARDIASIS)

KALYUZHNAYA, R.A.

Function of the vegetative section of the central nervous system in children in various forms of tuberculosis. Pediatriia, Moskva no 6:24-32 Nov-Dec 1952. (CIML 23:5)

1. Candidate Medical Sciences. 2. Of the Tuberculosis Clinic (Head -- Prof. I. V. Tsimbler) of the Institute of Pediatrics of the Academy of Medical Sciences USSR (Director -- Prof. M. N. Kazantseva).

KALYUZHNAYA, R.A.

Early diagnosis of tuberculosis in children. Fel'dsher & akush. no.6: 16-22 June 1953. (CLML 25:1)

1. Candidate Medical Sciences. 2. Moscow.

KALYUZHNAYA, R.A.

Cardiac lesions in children in various forms of tuberculosis; management and therapy. Fel'dsher & akush. no.8:19-25 Aug 1953. (CLML 25:1)

1. Candidate Medical Sciences. 2. Moscow.

KALYUZHNAYA, R.A., kandidat meditsinskikh nauk

Cardiac function in various forms of tuberculosis in children. Probl. tub. no.3:21-30 My-Je '54. (MLRA 7:11)

1. Iz tuberkuleznoy kliniki (zav. prof. I.V.TSimbler) Instituta pediatrii Akademii meditsinskikh nauk SSSR (dir. prof. M.M.Kazantseva)

(TUBERCULOSIS, in infant and child, heart in,)
(HEART, in various diseases, tuberc. in child.)

KALYUZHNAYA, R.A.

KALYUZHNAYA, R.A., kandidat meditsinskikh nauk.

Differential diagnosis of cardiovascular diseases with chronic tuberculous intoxication from early forms of rheumatic heart disease in children. Pediatriia no.6:26-35 N-D '54. (MLRA 8:4)

1. Iz Instituta pediatrii AMN SSSR (dir.-prof. O.D.Sokolova-Ponomareva.)

(RHEUMATIC HEART DISEASE, differ. diagnosis cardiovasc. dis. with tuberc. intoxication)
(CARDIOVASCULAR DISEASES, in infant and child compl. with chronic rheum. manifest. differ. diag. from rheum. heart dis.)

KALYUZHNAYA, R.A., kandidat meditsinskikh nauk (Moskva)

Early diagnosis of rheumatism in children. Fel'd. i akush. no.10:17-22 O '54. (MLRA 7:11)
(RHEUMATISM, in infant and child, diag.)

KALYUZHNAYA, R.A.

MOSKACHEVA, K.A., kandidat meditsinskikh nauk; KALYUZHNAYA, R.A., kandidat meditsinskikh nauk; YEFIMOVA, A.A.

Roentgenotherapy of cerebral edema complicating tuberculous meningitis. Vest.rent.i rad. no.1:49-53 Ja-F '55. (MLRA 8:5)

1. Iz Instituta pediatrii (dir. prof. M.N.Kazantseva) Akademii meditsinskikh nauk SSSR i rentgenoterapevticheskogo otdela (zav. prof. L.D.Podlyashuk) Gosudarstvennogo nauchno-issledovatel'skogo instituta rentgenologii i radiologii imeni V.M.Molotova (dir. I. G. Lagunova).

(TUBERCULOSIS, MENINGEAL, complications,
brain edema, ther., x-ray)
(RADIOTHERAPY, in various diseases,
brain edema in tuberc. meningitis)
(BRAIN, diseases,
edema in tuberc. meningitis, x-ray ther.)
(EDEMA,
brain, in tuberc. meningitis, x-ray ther.)

2285. KALYUZHNAYA R.A. Tb Clin., Inst. of Pediat., Acad. of Med. Sci., Moscow. *Disturbances in the function of the vegetative part of the central nervous system in tuberculosis in children (Russian text) Ž. NEVROPAT. PSIKHIAT. 1955, 55/1 (22-28) Tables 2

Investigation of the condition of the nervous system in 54 children with tb was ef-

2085

fected by comparing the clinical data with the vegetative and the humoral indices. Four types of functional vegetative disturbances were established: repression of both parts of the vegetative nervous system, irritation of both parts, and irritation of the sympathetic or of the parasympathetic part. The data obtained showed no correlation between the form or localization of the tuberculous process and the different types of disturbances of the vegetative nervous system. One could establish a certain relationship between the severity of the vegetative nervous system lesion and the degree of general toxaemia. The investigations carried out showed that the rapid changes in the activity of cholesterase from low to high figures are prognostically favourable. The irritation of both parts usually coincides with the clinical improvement of the patients or precedes it. Lasting irritation without any tendency to normalization is an unfavourable sign. The irritation of the sympathetic part could be more often observed than that of the parasympathetic part. This may be explained by the sympatheticotropistic action of streptomycin. References 7.

Golland - Moscow (XV, 7, 8)